Message

From: Werner, Lora [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP

(FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=921F9F156035403FA605C142A287CC1A-LWERNE02]

Sent: 10/28/2017 7:13:26 PM

To: Walter M Ivey [Walter.M.Ivey@wv.gov]

Subject: Fwd: HCR Liquid MSDS

Sent from my iPhone

Begin forwarded message:

From: "Nickle, Richard (ATSDR/DTHHS/OD)" <ran2@cdc.gov>

Date: October 28, 2017 at 3:08:57 PM EDT

To: "Werner, Lora S. (CDC epa.gov)" <werner.lora@epa.gov>, "Edge, Charles (ATSDR/DTHHS/OD)"

<ibd7@cdc.gov>

Cc: "Markiewicz, Karl (EPA) (CDC epa.gov)" < Markiewicz. Karl@epa.gov>, "Helverson, Robert (CDC

epa.gov)" <helverson.robert@epa.gov>

Subject: RE: HCR Liquid MSDS

Well, these SDS are wonderfully uninformative. Everything is either proprietary, not available, or mineral oil.

Reading between the lines - maybe too much. Flashpoints are all above 200C (roughly 400-450F or a bit higher), but this fire was probably easily above that. Specific gravities when listed are close to 1 but generally a little higher. In colder water, all of these are probably sinkers in the water column. Coupled with the "green" plastics thing and the fact that they used mineral oil to achieve the liquid state on the one product, it probably means they are not very soluble in water. If they were stored in closed top drums, then they are probably the liquid formulations possibly with a mineral oil carrier. In drums with removable lids, then they were probably the flakes. Apparently, even the flakes are sometimes shipped as molten product, but it is unlikely they were stored in a warehouse like that. The fire temps would change them into the molten product, possibly adding the polymers of the drums into any liquid mixture in the runoff. The compounds are listed as 90% hydrocarbons unregulated by any of the recognized transport agencies (DOT, IMDG, IATA, etc.) except when shipped as an elevated temperature cargo. To be unregulated in transport, they are probably straight or branched chain alkanes. That fits with the flashpoints, the densities, and the viscosity. Thermal breakdown products when listed are oxides of carbon, which implies that only hydrocarbons are present; though there may be metals used to create different colors in the finished plastic. The primary use of these products are as an adhesive or a resin; that implies an epoxy type product. The products listed are likely the two epoxy components (resin and reagent) stored in separate drums. One of the SDS refers to a viscous liquid and they all talk about a "softening point" at about half of the flashpoint temperatures. This softening point is probably close to the molten temperatures during shipment. If the names mean anything as to structure, then they may be 9 carbon chain or 5 carbon chain compounds. Think of pentane or nonane, though they are probably a bit different.

This is obviously pretty speculative, but I think it is in the ball park - if the ball park is big enough. Not sure how far out in left field it might be.

From: Werner, Lora S. (CDC <u>epa.gov</u>)
Sent: Friday, October 27, 2017 5:26 PM

To: Edge, Charles (ATSDR/DTHHS/OD) < ibd7@cdc.gov>; Nickle, Richard (ATSDR/DTHHS/OD)

<ran2@cdc.gov>

Cc: Markiewicz, Karl (EPA) (CDC epa.gov) < Markiewicz. Karl@epa.gov>; Helverson, Robert (CDC

epa.gov) < helverson.robert@epa.gov>

Subject: Fwd: HCR Liquid MSDS

Another item at Ames Warehouse.

Sent from my iPhone

Begin forwarded message:

From: "Ivey, Walter M" < Walter.M.lvey@wv.gov>

Date: October 27, 2017 at 1:28:45 PM EDT

To: "Werner, Lora (<u>Werner.Lora@epa.gov</u>)" <<u>Werner.Lora@epa.gov</u>>, "Thomasson, Erica R" <<u>Erica.R.Thomasson@wv.gov</u>>, "Murphy, Patrick M"

<<u>Patrick.M.Murphy@wv.gov</u>>
Subject: FW: HCR Liquid MSDS

FYI

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From: Joins, Rusty T

Sent: Friday, October 27, 2017 1:27 PM

To: Ivey, Walter M < <u>Walter M. Ivey@wv.gov</u>>; Parsons, Glennda M

<Glennda.M.Parsons@wv.gov>; Harbison, Ryan T <Ryan.T.Harbison@wv.gov>;

Gianato, Jimmy J < Jimmy J. Gianato@wv.gov>

Subject: Fwd: HCR Liquid MSDS

Walt, Ryan, Glenda and Jimmy.

According to the information provided by the owner HCR resin was in Sector H from the map identifying storage areas. The attached SDS sheets are for the varieties of HCR resin.

The high volatile content in the outfall could be attributed to the presence leaking or and or burning of the HCR resin.

Rusty Joins WVDEP HSER

----- Original message -----

From: Tom Keefer <<u>Keefer@callspsi.com</u>>
Date: 10/26/17 11:19 PM (GMT-05:00)
To: "Joins, Rusty T" <<u>Rusty.T.Joins@wv.gov</u>>

Subject: Fwd: HCR Liquid MSDS

SDS we discussed for liquid HCR.

Thomas A. Keefer Special Programs and Development Manager SPSI Emergency Response Solutions 318 Lee Street West, Suite 100 Charleston, WV. 25303

Mobile: (304) 545-1943 Fax: (304) 346-4346

Emergency: (877) 228-7774

Begin forwarded message:

From: Sunny Naik <<u>sunny@sirnaik.com</u>>
Date: October 26, 2017 at 11:40:19 AM EDT

To: <keefer@callspsi.com>

Cc: 'Neal Charkatz' < ncharkatz@gggco.com>, 'Randy Goodman'

< RGoodman@gggco.com >, "'Jason M. Berk'"

<jmberk@gggco.com>, <maxwell@sirnaik.com>, 'Somil Desai'

<somil@ieiplastics.com>
Subject: HCR Liquid MSDS

Reply-To: <sunny@sirnaik.com>

Mr. Keefer

The additional MSDS for the material in the barrels in Liquid for are attached here.

Please contact me on anything you may need.

Sunny Naik Accounts Manager SirNaik, LLC sunny@sirnaik.com 410.948.2421